

ABSTRACT OF DISCLOSURE

A partial stroke testing system for online testing of emergency shut-off valve, said system is designed for implementation on an emergency shut-off valve with a main solenoid with manual reset, main solenoid valve, quick exhaust valve and a pneumatic actuator connected to a source of pressurized air supply for opening and closing the said emergency shut-off valve and the said shut-off valve normally movable between a fully open and fully closed position. The system also include control means programmed into the plant emergency shutdown system controller for initiating electrical signal for initiating a test and for enhancing the bleed rate from the said pneumatic actuator in the event of a emergency trip signal. Test means for testing the said emergency shut-off valve without fully closing the emergency shut-off valve in response to signal from the said control means is included in the system. The said test means, controlled by the said control means, include a second solenoid and a second solenoid valve for bleeding off pressurized air to thereby move the said emergency shut-off valve from full opened position to partially closed position. Means for limiting the movement of said emergency shut-off valve to a partially closed position because of the bleeding of pressurized air is included in the system. The system also includes an isolation valve for isolating the said test means for maintenance purpose.